Geomagnetic modulation extracted from cosmogenic Be-10 kyr in highly accumulating Atlantic drift deposits

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We present a reconstruction of the global $^{10}$Be production rate over the past 250,000 years from three highly accumulating marine sediment cores located in the North-, Northwest-, and South Atlantic Ocean (ODP-Sites 983, 1063 and 1089). The $^{10}$Be-records are cleaned up for oceanic transport processes and Principal Component Analysis (PCA) is used to extract the common signal that reflects variations of the global $^{10}$Be production rate. This reconstruction, thus, serves as (i) a record of past flux of Galactic Cosmic Rays (GCR), (ii) a proxy for past geomagnetic dipole strength, and (iii) as a global matching tool to synchronize marine archives with ice cores and terrestrial records.